ZoneFlex™ 7962

Dual-Band 802.11n Smart Wi-Fi Access Point

The highest performing enterprise-class dual-band 802.11n Smart Wi-Fi AP with adaptive antenna technology

The Ruckus ZoneFlex 7962, the industry's top performing dual-band 802.11n access point with adaptive antenna technology, delivers ultra-high speed, reliable and longest-range connectivity within challenging RF environments.

The ZoneFlex 7962 is based on adaptive antenna technology that extends signal range two to four times while minimizing packet loss by constantly routing Wi-Fi transmissions over the highest performing signal paths.

The world's only enterprise-class AP that concurrently supports Automatic Interference Mitigation (AIM), spatial multiplexing and adaptive antenna technology, the ZoneFlex 7962 delivers the industry's most solid 802.11n performance at range. Because the ZoneFlex 7962 is able to constantly find the best RF paths for each packet, once deployed, enterprises never have to worry about constant site surveys as the environment changes.

Using Ruckus' breakthrough ChannelFly dynamic channel management, ZoneFlex 7962 automatically select the best channel that will give users the highest throughput. Measuring not only interference but throughput as well, ChannelFly analyzes trends in the RF environment over time. When a significant drop in throughput arises, ZoneFlex APs react by automatically switching to the channel that offers the best client throughput potential. Channel change notifications orchestrate a coordinated change with connected clients, ensuring no client left behind.

The ZoneFlex 7962 is also the only 802.11n product purpose-built for hotels, schools and enterprises that enables high-definition IPTV, video-on-demand and other video applications while supporting VoIP and data applications for guests and employees.

Ideal for multimedia and high-density user environments, the ZoneFlex 7962 can be deployed as a standalone access point or as part of centrally-controlled Smart Wireless LAN with the Ruckus ZoneDirector. Smart Mesh Networking, another unique feature, makes the ZoneFlex 7962 perfect for reliably extending wireless LAN services to areas where cabling Ethernet isn't possible or economical — saving time and money. With dual radios, the ZoneFlex 7962 delivers high-performance throughout the mesh network.

The ZoneFlex 7962 is also perfect for service providers interested in delivering high-performance multimedia hotspots, hotzones and managed services. Coupled with the Ruckus FlexMaster Wi-Fi management platform, the ZoneFlex 7962 opens the door for extending branded broadband services and new revenue-generating services.

BENEFITS

Highest performance at range

Adaptive antenna technology enables Wi-Fi signals to be constantly formed and directed over the best performing signal paths thereby ensuring the lowest packet loss and highest performance at range.

Extended coverage means fewer APs

Directional, high-gain antennas dynamically combine to give hotspot operators and enterprises 2- to 4-times the coverage over typical consumer and enterprise APs.

Wire-like reliability

Advanced smart antenna array and Quality of Service (QoS) technology combine to deliver the industry's most reliable and highest performing 802.11n system available.

Concurrent support for high-definition IP video, voice and data

A directional, high-gain antenna finds the best path for any given transmission allowing unprecedented support for picture perfect high-definition video, crystal clear voice and high speed data.

Channel selection optimizes throughput

ChannelFly dynamic channel management, based on throughput measurements, not just interference, chooses the best channel to give users the highest throughput.

Distributed forwarding architecture eliminates bottlenecks

Standalone or controller-based, traffic is not forced through the controller eliminating any single point of failure or performance bottleneck.

Simple extension of WLAN services

Integrated support for Smart Mesh Networking gives enterprise the power to easily extend WLAN services wherever needed and without having to run costly and cumbersome Ethernet cabling to every AP.

Investment protection for legacy Wi-Fi networks

The ZoneFlex 7962 gives enterprises protection over their wireless investments by enhancing performance and range for legacy 802.11a/b/g clients.

Hassle free migration to higher speed Wi-Fi

Support for standard 802.3af power over Ethernet allows enterprises to use existing PoE switches without costly upgrades.

Enables new class of provider hotspots services

New revenue opportunities for operators such as Voice-over-WLAN services, extended enterprise access and IP video applications.

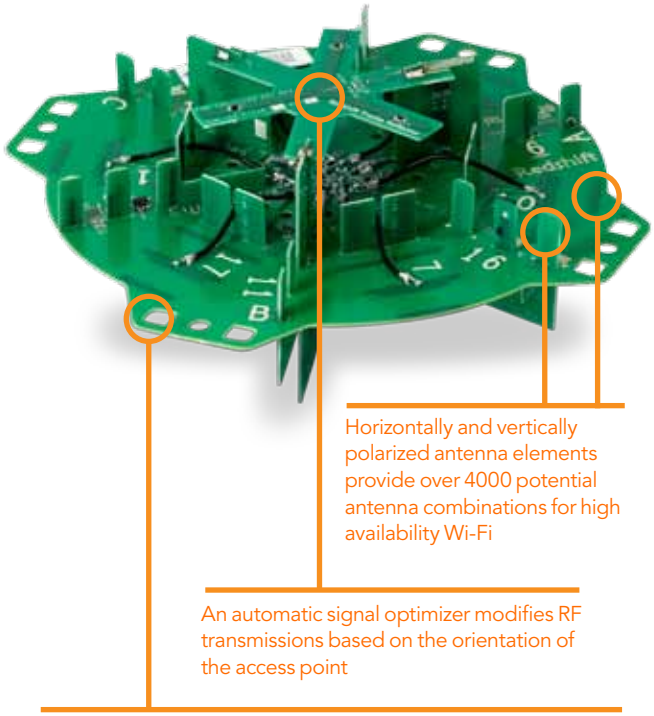
Ruckus®
Simply Better Connections.

ZoneFlex 7962

Dual-Band 802.11n Smart Wi-Fi Access Point

Patented BeamFlex™ Technology Extends Signal Range, Improves Stability of Client Connections

The ZoneFlex 7962 Smart Wi-Fi access point integrates a software-controlled smart antenna array that delivers 7dBi of signal gain and 15dB of interference rejection. This allows a 2 to 4x improvement in signal range and a reduction in packet loss from the ability to automatically avoid interference and obstacles.


Horizontally and vertically polarized antenna elements provide over 4000 potential antenna combinations for high availability Wi-Fi
An automatic signal optimizer modifies RF transmissions based on the orientation of the access point
A patented smart antenna array integrates high-gain, directional antenna elements deliver up to 7dBi in signal gain and up to -15dB of interference avoidance for unprecedented range extension, signal reliability and higher data rates.

Advanced WLAN Applications with Smart/OS

When used with the Ruckus ZoneDirector Smart WLAN controller, the ZoneFlex 7962 supports a wide range of value-added applications such as guest networking, Smart Wireless Meshing, Dynamic PSK, hotspot authentication, wireless intrusion detection and many more. With Smart/OS, up to 2,048 discrete WLANs can be created and mapped to the same or different APs or VLANs. WLANs can also be grouped and shared by specific APs. In a centrally managed configuration, the ZoneFlex 7962 works with a wide range of authentication servers including Microsoft's Active Directory, LDAP, and RADIUS.

Flexible Deployment Options

ZoneFlex 7962 APs can be deployed as a standalone AP or as part of a centrally managed wireless LAN using ZoneDirector Smart WLAN controllers. ZoneFlex 7962's can be deployed across any L2/L3 network, and can bridge traffic onto the local network, tunnel to a central location using L2TP or PPPoE, or route between the WAN and NAT'd private subnets. It can be wired to the network or connect wirelessly by meshing to another AP when Ethernet cabling is unavailable. When used with ZoneDirector, the ZoneFlex 7962 is automatically configured through the network making deployment quick and easy.

Complete Local and Remote Management

The ZoneFlex 7962 can be managed as a standalone AP through a Web-based GUI, using SNMP or through the Ruckus FlexMaster Wi-Fi remote management system. Local management can also be performed using the ZoneDirector Smart WLAN controller. FlexMaster is a LINUX-based software platform that uses industry-standard protocols to perform bulk configuration, fault detection, monitoring and a wide range of troubleshooting capabilities over a wire area connection. The ZoneDirector enables local management and control of APs, adding value-added services such as transmit power control, guest networking and meshing.

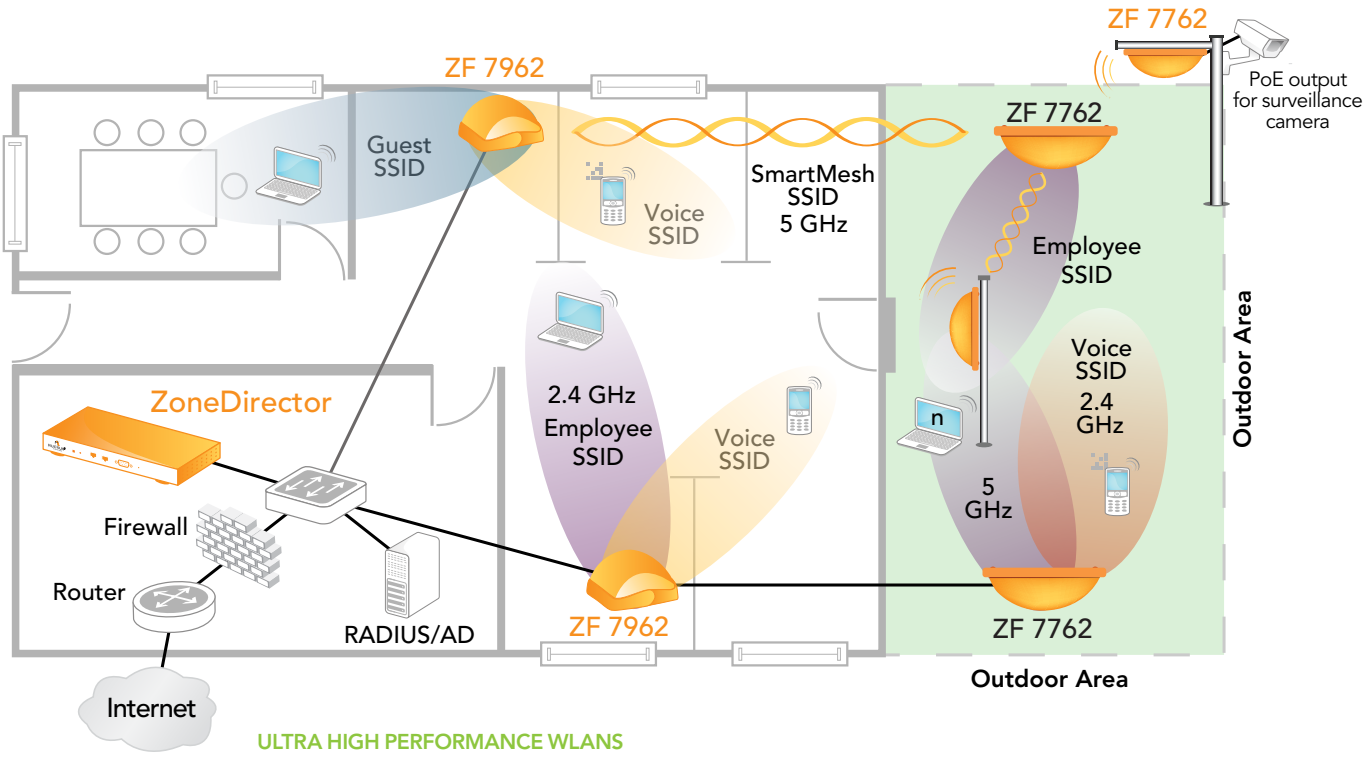
FEATURES

- Concurrent dual-band (5GHz/2.4GHz) support
- Adaptive antenna technology and advanced RF management
- Up to 7dBi signal gain / -15dB interference rejection
- Automatic interference avoidance, optimized for high-density environments
- Integrated smart antenna array with over 4,000 unique patterns for ultra reliability
- Standard 802.3af Power over Ethernet (PoE)
- Router mode with NAT and DHCP services
- 2 to 4 times extended range and coverage
- Multicast IP video streaming support
- 600 Mbps of user throughput (300 Mbps/radio)
- 16 BSSIDs with unique QoS and security policies
- Advanced QoS packet classification and automatic priority for latency sensitive traffic
- Dynamic per-user rate-limiting for hotspot WLANs
- WEP, WPA-PSK (AES), 802.1X support for RADIUS and Active Directory*
- Ethernet 802.1x port-based authentication (authenticator and supplicant)
- Smart Mesh Networking*
- Zero-IT and Dynamic PSK*
- Admission control/load balancing*
- Band steering and airtime fairness
- Captive portal and guest accounts *
- Wall or ceiling mountable
- Limited lifetime warranty

*when used with Ruckus ZoneDirector controller.

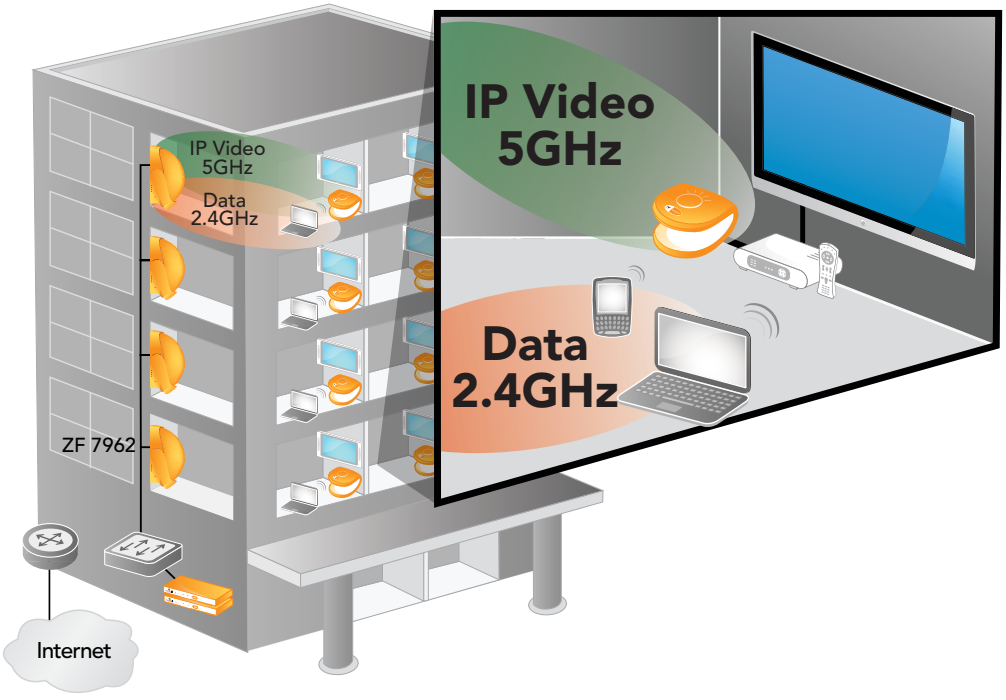
ZoneFlex 7962

Dual-Band 802.11n Smart Wi-Fi Access Point



ULTRA HIGH PERFORMANCE WLANS

Through the use of an integrated smart antenna array specifically designed for 802.11n networking, the Ruckus ZoneFlex 7962 provides the industry's highest performing enterprise WLAN solution. WLANs can be easily extended where Ethernet is unavailable through the use of Smart Mesh Networking.



CONCURRENT IP VIDEO AND DATA

With integrated quality of service mechanisms and an intelligent multi-element antenna array, the ZoneFlex 7962 stands alone as the only dual-band 802.11n system capable of supporting picture perfect transmission of IP-based streaming video concurrently with high-performance data traffic.

Specifications

PHYSICAL CHARACTERISTICS	

POWER	• External power adapter
	  • Input: 110-240V AC
	  • Output: 12V DC, 1.5A
	• Power over Ethernet Class 0

PHYSICAL SIZE	• 19.43cm (L), 14.43cm (W), 12.38cm (H)
WEIGHT	• 680 grams (1.5 lbs.)
ANTENNA	• Internal software-configurable antenna array with directional and omni high-gain elements that provide over 4,000 unique antenna patterns
ETHERNET PORTS	• 2 ports, auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45 • Power over Ethernet (802.3af)
LOCK OPTION	• Integrated Kensington lock
ENVIRONMENTAL CONDITIONS	• Operating Temperature: 32°F (0°C) - 122°F (50°C) • Operating Humidity: 15% - 95% non-condensing
POWER DRAW	• 12.95W (PoE) • 15W (12V DC)

PERFORMANCE AND CAPACITY	
TARGET UDP THROUGHPUT	• 150-200 Mbps (300 Mbps bursts) sustainable throughput for a 5000 sq. foot (460 sq meter) area for each radio for each band
CONCURRENT STATIONS	• 256
SIMULTANEOUS VoIP CLIENTS	• Up to 20

APPLICATIONS	
HOTSPOT	• WISPr
VOICE	• 802.11e/WMM • U-APSD

NETWORK ARCHITECTURE	
IP	• IPv4, IPv6, dual-stack
VLANs	• 802.1Q (1 per BSSID or dynamic, per user based on RADIUS) • Port-based
802.1X FOR ETHERNET PORTS	• Authenticator • Supplicant
TUNNELING	• L2TP, PPPoE

MULTIMEDIA AND QUALITY OF SERVICE	
802.11e/WMM	• Supported
SOFTWARE QUEUES	• Per traffic type (4), per client
TRAFFIC CLASSIFICATION	• Automatic, heuristics and TOS based or VLAN-defined
RATE LIMITING	• Dynamic, per-user or per-WLAN

MANAGEMENT	
DEPLOYMENT OPTIONS	• Standalone (individually managed) • Managed by ZoneDirector • Managed by FlexMaster
CONFIGURATION	• Web User Interface (HTTP/S) • CLI (Telnet/SSH), SNMP v1, 2, 3 • TR-069 vis FlexMaster
AUTO AP SOFTWARE UPDATES	• FTP or TFTP, remote auto available

WI-FI	
STANDARDS	• IEEE 802.11a/b/g/n • 2.4GHz and 5GHz concurrent operation
SUPPORTED DATA RATES	• **802.11n:** 6.5Mbps -144.4Mbps (20MHz) 6.5Mbps - 300Mbps (40MHz) • **802.11a:** 54, 48, 36, 24, 18, 12, 9 and 6Mbps • **802.11b:** 11, 5.5, 2 and 1 Mbps • **802.11g:** 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
RADIO CHAINS	• 3 x 3
SPATIAL STREAMS	• 2
RF POWER OUTPUT	• 28 dBm/600 mW
CHANNELIZATION	• 20MHz and/or 40MHz
FREQUENCY BAND	• IEEE 802.11n: 2.4 – 2.484 GHz and 5.15 – 5.85 GHz • IEEE 802.11a: 5.15 – 5.85 GHz • IEEE 802.11b: 2.4 – 2.484 GHz
OPERATING CHANNELS	• US/Canada: 1-11, Europe (ETSI X30): 1-13, Japan X41: 1-13 • 5GHz channels: Country dependent for the following channel ranges: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165
BSSID	• Up to eight per radio (16 total)
POWER SAVE	• Supported
WIRELESS SECURITY	• WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i • Authentication via 802.1X, local authentication database, support for RADIUS, LDAP, and ActiveDirectory
CERTIFICATIONS	• U.S., Europe, Australia, Brazil, Canada, Colombia, Hong Kong, India, Israel, Malaysia, Mexico, New Zealand, Philippines, Singapore, Taiwan, Thailand, Vietnam • WEEE/RoHS compliance • EN 60601-1-2 • Wi-Fi Alliance Certification (Wi-Fi Certified™)

Product Ordering Information

MODEL	DESCRIPTION
ZoneFlex 7962 Dual Band 802.11n Access Point	
901-7962-XX00	Centrally managed concurrent dual band 802.11n access point, no power adapter
Optional Accessories	
902-0157-0000	Flat ceiling & wall mounting kit
902-0158-0000	Drop ceiling mounting kit
902-0162-XXYY	PoE injector (sold in quantities of 10 or 100)
902-0169-XX10, XX11	Power Supply (sold in quantities of 10 or 60)

PLEASE NOTE: When ordering ZoneFlex Indoor APs, you must specify the destination region by indicating -US, -IL, or -WW instead of XX. When ordering PoE injectors or power supplies, you must specify the destination region by indicating -US, -EU, -AU, -BR, -CN, -IN, -JP, -KR, -SA, -UK, or -UN instead of -XX.

Ruckus Wireless, Inc.
880 West Maude Avenue, Suite 101, Sunnyvale, CA 94085 USA (650) 265-4200 **Ph** \ (408) 738-2065 **Fx**

Ruckus™ WIRELESS

Copyright © 2012, Ruckus Wireless, Inc. All rights reserved. Ruckus Wireless and Ruckus Wireless design are registered in the U.S. Patent and Trademark Office. Ruckus Wireless, the Ruckus Wireless logo, BeamFlex, ZoneFlex, MediaFlex, MetroFlex, FlexMaster, ZoneDirector, SpeedFlex, SmartCast, and Dynamic PSK are trademarks of Ruckus Wireless, Inc. in the United States and other countries. All other trademarks mentioned in this document or website are the property of their respective owners. 801-70675-001 rev 09